

Three New Species of the Harpaline Selenophori Group from Asia (Coleoptera, Carabidae)

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Abstract Three new species of the harpaline Selenophori group are described, under the following names: *Oxycentrus jelineki* from North China, *O. hayakawai* from Borneo, and *Coleolissus debilopunctatus* from Laos. *Oxycentrus jelineki* is recorded from the northernmost area of the generic distribution.

Species of the Selenophori group are widely distributed in Asia, Africa, Eurasia, South and Central America and Australia. Recently, many new taxa of the group have been found in Asia and species diversity of the group, especially of the endemic genera *Oxycentrus*, *Coleolissus* and *Trichotichnus*, several species of which are spread to the Eurasian region, are distinct here. I have been continuing to examine specimens of the group and found three new species.

In this paper, I am going to describe them as *Oxycentrus* (*Oxycentrus*) *jelineki* sp. nov. from North China, *O.* (*Oxycentropsis*) *hayakawai* sp. nov. from Borneo, and *Coleolissus* (*Tenuistilus*) *debilopunctatus* from Laos. *Oxycentrus jelineki* is peculiar in pubescence on the tarsi and newly recorded from the northernmost area within all the known species of the genus.

Before going into details, I wish to express my deep gratitude to Dr. Josef JELÍNEK of the Narodni Museum v Praze, Praha for kind loan of material under his care. I also cordially thank the late Mr. Hirofumi HAYAKAWA for his kind offer of numerous invaluable materials for my study including the specimens of *O. hayakawai* described herein.

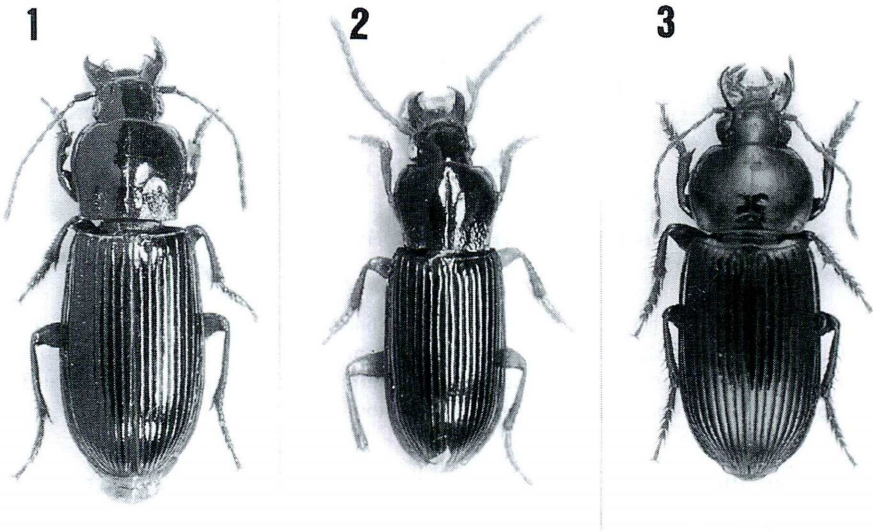
I employ the abbreviation of depositories as follows: NMP – the Narodni Museum v Praze; OMNH – the Osaka Museum of Natural History; cNI – author's collection. Concerning measurement of body parts, see former papers of mine.

Oxycentrus (*Oxycentrus*) *jelineki* N. ITO, sp. nov.

(Figs. 1 & 4)

Body elongate, subparallel-sided, black to slightly brownish black, shiny, without iridescent lustre; buccal parts, antennae, and legs brown to reddish brown, lateral margins and sutural intervals slightly brown.

Head not large in size, 0.64–0.65 times as wide as pronotum, moderately convex,



Figs. 1-3. Habitus of the Selenophori group spp. — 1, *Oxycentrus (Oxycentrus) jelineki* sp. nov.; 2, *O. (Oxycentropsis) hayakawai* sp. nov.; 3, *Coleolissus (Tenuistilus) debilopunctatus* sp. nov.

very sparsely covered with microscopic punctures, wide in interocular space which is three-fourths the width of head including eyes; labrum transversely quadrate, weakly triangulate at apex; clypeus roundly elevated, shallowly emarginate apically; clypeal suture thin, shallow, interrupted medially in the holotype; frontal impressions deep near apices, abruptly shallowed behind, obliterated in middle between the apices and supraorbital grooves; eyes not convex; temples rather long, gently oblique, approximately one-third the eye length; genuine ventral margins of eyes isolated from buccal fissure; antennae moniliform, 3rd segment pubescent in apical three-fifths, as long as the 4th and four-sevenths longer than the 2nd, 2nd bearing setae more than ten; ligula not widened forwards, rounded at apical angles; paraglossae rather wide, a little prolonged forwards beyond ligula; mentum with epilobes well widened apicad, median tooth much sharpened; microsculpture obscure, visible as transverse meshes here and there.

Pronotum subquadrate, gently convex, widest at apical two-fifths, microscopically and very sparsely punctate on disc, coarsely and moderately so in lateral furrows and basal portions except baso-median area possessing sparse and minute punctures; sides weakly arcuate forwards from middle, thence linearly and gently oblique backwards, shallowly and widely sinuate before base, thinly bordered; apex entirely bordered, shallowly and obtrapezoidally emarginate; base 1.14–1.16 times as wide as apex, feebly bisinuate, with border thin and entire or partly broken; apical angles weakly protruding forwards, widely rounded; basal angles each acute or very narrowly rounded, a little larger than right angle, without tooth; front lateral furrows each narrow, engraved in a

line, isolated from basal fovea by weak swell; basal foveae widely oblong; front transverse impression vague, the hind one obsolete; median line clear, reaching apex and base; microsculpture mostly invisible under $80\times$ magnification, observed as transverse lines partly on disc and as isodiametric meshes in lateral furrows and basal punctures.

Elytra elongate, subparallel-sided, nearly one and two-thirds as long as wide, fairly elevated, very sparsely with microscopic punctures; humeri weakly arcuate; preapical sinus quite indistinct; apices not produced backwards, very widely rounded, acute at sutural angles; bases gently oblique, feebly curved, sharply toothed at each lateral end; striae wide, deep, clearly crenulate, scutellar striole very short; intervals almost flat on disc, becoming a little convex apicad and basad, discal pore on 3rd interval absent; marginal series widely interrupted in middle, consisting of (7–8) + (10–11) umbilicate pores; microsculpture visible as vague transverse lines. Hind wings vestigial.

Ventral surface coarsely and moderately punctate on metepisterna, sparsely and minutely so on prosternum and 3rd to 6th abdominal sternites where the punctures bear short and tender pubescence; metepisternum well convergent behind, rather long in spite of reduced hind wings, 1.30 times as long as wide; 6th abdominal sternite in ♂ bisetose at each side and widely rounded apically.

Legs moderate in length; fore tibiae each widened forwards, clearly sulcate dorsally, with three short spines on apico-lateral side; tarsi bearing long pubescence dorsally, mid tarsus of ♂ with biseriate adhesive squamae on 2nd to 4th segments, hind tarsus one-eleventh shorter than the width of head, 1st segment approximately as long as the 2nd and 3rd taken together, 2nd one-fourth longer than the 3rd and three-fourths longer than the 4th, claw segment trisetose along inner ventral margin and bisetose along the external margin.

Aedeagus (Fig. 4) weakly arcuate, rather slender, gradually thinned distad, knob-shaped and sharply hooked dorsad at apex; apical orifice widely open, attaining nearly to basal bulb; apical lobe subtrapezoidal, weakly rounded at distal margin; ventral surface unbordered, with some minute thorns.

Length: 7.6–8.8 mm. Width: 2.9–3.2 mm.

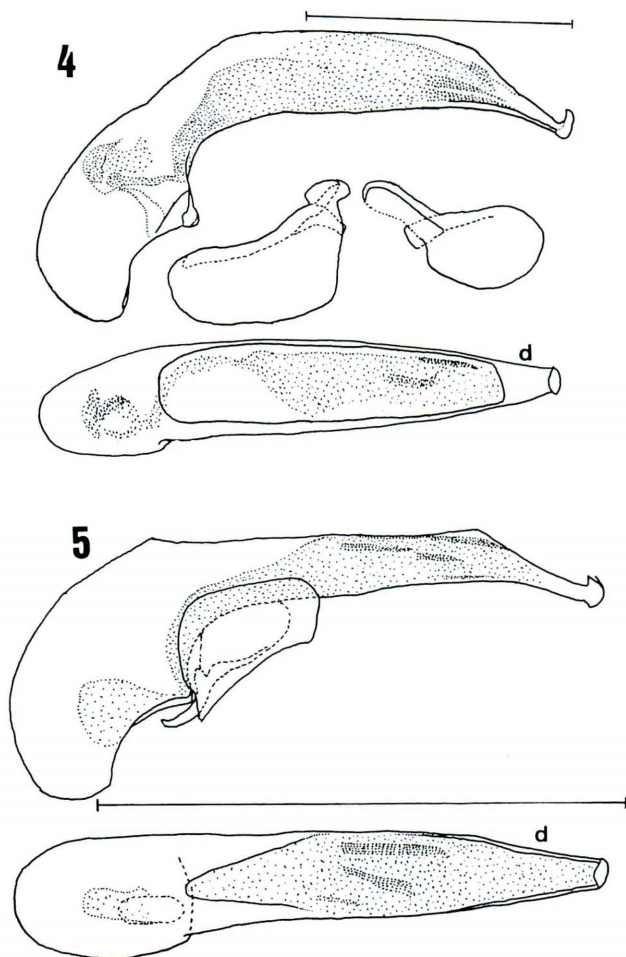
Female unknown.

Holotype: ♂, Huashan, alt. –500 m, 110 km E of Xi'an, Shaanxi Prov., China, 23–24–VI–2000. (preserved in OMNH). Paratype; 1♂, Peking (=Beijing), China (preserved in NMP).

Remarks. This new species is recorded from the northernmost area within the known species of the genus. The pubescent tarsi are peculiar in usual species of the genus and considered an apomorphic character (NOONAN, 1985). *Oxycentrus*-species thrive in southern regions of Asia. The ancestor of the new species is surmised to have invaded recently to that place from South China.

The new species is similar to *Oxycentrus* (*Oxycentrus*) *argutoroides* (BATES), but is easily discriminated by the frontal impressions not entire, the borders of sides thinner, the elytra not possessing any discal pores, and the tarsi pubescent dorsally.

Etymology. The specific name, "*jelineki*" is dedicated to Dr. Josef JELÍNEK, Praha.



Figs. 4-5. Male genitalia of *Oxycentrus* spp. — 4, *Oxycentrus (Oxycentrus) jelineki* sp. nov.; 5, *O. (Oxycentropsis) hayakawai* sp. nov.; d, dorsal aspect. Scale: 1 mm.

***Oxycentrus (Oxycentropsis) hayakawai* N. ITO, sp. nov.**

(Figs. 2 & 5)

Body slightly brownish black, shiny, not iridescent on elytra; palpi, antennae, and tarsi light brown, mandibles, labrum, lateral borders of pronotum and sutural intervals of elytra reddish brown.

Head gently elevated on frons, moderate in width, two-thirds the pronotal width, very sparsely with microscopic punctures; labrum subtransversely quadrate, shallowly emarginate at apex, fovea circular; clypeus almost linear apically, almost flattened, laterally with clear rugosities extending to ends of clypeal suture which is deeply engraved and straight; frontal impressions arcuately divergent and so deep that spaces

between the impressions and supraorbital grooves seem to be raised; eyes not large, distinctly prominent, so that temples are abruptly oblique; genuine ventral margins of eyes narrowly separated from buccal fissure; antennae moniliform, short, surpassing a little beyond pronotal base, 4th segment one-seventh shorter than the 3rd which is three-fifths longer than the 2nd; mandibles very elongate, strongly curved inwards, pointed at tips; apical segments of labial palpi well tumid medially, abruptly slender near apices; ligula narrow, weakly rounded at apex; paraglossae narrow, not prolonged forwards beyond ligular apex; median tooth of mentum regularly triangular, reaching just behind apical levels of epilobes which are gently widened forwards; microsculpture mostly invisible, partly and obscurely observed as transverse meshes.

Pronotum quadrate, about one-fifth wider than long, fairly convex; sides gently arcuate apicad from apical two-fifths, from there almost linearly convergent basad, rather widely sinuate before base; apex shallowly and obtusely emarginate, border entire or briefly interrupted in middle; base 1.11–1.15 times as wide as apex, slightly arcuate at sides, bordered only there; apical angles weakly protrudent, narrowly rounded; basal angles slightly larger than right angle, without tooth; lateral furrows narrow, joining basal foveae which are widely flattened; front transverse impressions short and vague, the hind one obsolete; median line deeply carved, reduced just behind apex and reaching base; surface widely smooth on disc, very sparsely and minutely punctate apico-laterally, coarsely and moderately so from middle of lateral furrows to basal foveae; microsculpture more or less clear, consisting of isodiametric meshes in lateral furrows and basal foveae and of mixtures with isodiametric and transverse meshes in the remaining portions.

Elytra parallel-sided, two-thirds longer than wide, evenly convex, without punctures; sides weakly curved in humeri, shallowly sinuate before apices, which are widely arcuate and rounded at sutural angles; apices close to each other; bases each oblique at side, forming an acute angle with lateral margin, sharply toothed at the angle; striae fully deep and clearly crenulate, scutellar striole lacking; intervals rather convex, discal pores absent on each 3rd interval; marginal series widely interrupted in middle, composed of 8+9 umbilicate pores; microsculpture barely visible as transverse lines. Hind wings entirely developed.

Ventral surface largely impunctate and not pubescent; metepisternum steeply convergent behind, three-fifths longer than wide; apical margin of 6th abdominal sternite quadrisetose and weakly rounded in ♂.

Legs short; fore tibiae dilated apicad, with three short and stout spines along each apico-external margin, sulcus clearly engraved in basal four-fifths; tarsi glabrous, mid tarsus of ♂ bearing biseriate adhesive hairs ventrally on 2nd to 4th, hind tarsi one-sixth shorter than the width of head, 1st segment one-tenth longer than the 2nd and 3rd taken together, twice the 2nd, 3rd one-fourth longer than the 4th, claw segment bisetose along each ventral margin.

Aedeagus (Fig. 5) thin, straight prolonged backwards, gently curved near apical one-fourth, apex hemispherically thickened, acutely hooked dorsad; apical orifice nar-

row, inner sac without any sclerites; apical lobe narrowly triangular, rounded at tip.

Length: 4.6–4.9 mm. Width: 1.8–1.9 mm.

Female unknown.

Holotype: ♂, Mt. Trus Madi, alt. 1,300 m, Sabah, Borneo, Malaysia, 7~18-IV-1996, Nobuhisa YAZAWA leg. (preserved in OMNH). Paratype: 1♂, same data as the holotype. (preserved in cNI).

Remark. This new species is peculiar in small size and resembles *Oxycentrus* (*Oxycentrus*) *parvus* N. ITO from Mt. Kinabalu in Borneo, but the body is a little smaller and narrower, the pronotum is sinuate before base, more sharply angulate at basal angles, and more strongly depressed in basal foveae, and the elytra do not possess scutellar striole.

Etymology. The specific name, “*hayakawai*” is dedicated to the late Mr. Hirofumi HAYAKAWA, Matsumoto, who greatly contributed to rearing many young insect lovers in Nagano and develop their society.

Coleolissus (Tenuistilus) debilopunctatus N. ITO, sp. nov.

(Figs. 3 & 6)

Body widely oblong, pitchy black, very shiny, weakly iridescent on pronotum and weakly to clearly so on elytra; palpi, labrum, antennae and fore tarsi light brown, mid and hind tarsi somewhat dark brown, mandibles dark reddish brown, femora blackish brown.

Head small, a little smaller than two-thirds the pronotal width, gently elevated, very sparsely and microscopically punctate, with interocular space narrow and 0.65–0.67 times as wide as the width of head; labrum subsquare, truncate apically; clypeus almost even, indistinctly rugose at each side; clypeal suture thin, shallow and entire; frontal impressions arcuately running to supraorbital grooves, rather deep near apices, gradually shallowed behind; eyes large, hemispherically prominent; temples very short; genuine ventral margins of eyes reaching buccal fissure; antennae fusiform, surpassing slightly beyond elytral bases, 3rd segment pubescent in apical half, as long as the 4th, and twice the 2nd; mandibles stout and sharp, terebral tooth of left mandible weakly produced, retinacular tooth of right mandible sharply prominent; labial palpi moderate in thickness; ligula parallel-sided, weakly biarcuate at apex; paraglossae rather widely fan-shaped, well prolonged forwards beyond ligula; microsculpture consisting of mixtures of small isodiametric and quadrate meshes, though clearly visible.

Pronotum quadrate, 1.34–1.38 times as wide as long, gently arcuate at sides, rather convex, mostly smooth, moderately and rather densely punctate only in basal foveae; sides almost evenly arcuate forwards and backwards; apex shallowly emarginate, straight in middle, bordered throughout; base one-fourth wider than apex, straight or feebly bisinuate, border thin, almost complete or often obliterated near median line; lateral furrows narrow in apical third, thence gradually widened and combined with basal foveae; basal foveae transverse, almost flattened, though shallowly short-grooved

inner sides; front transverse impression invisible or vague, the hind one obsolete; median line thin and very shallow, reduced near apex and base; microsculpture invisible in $80\times$ magnification.

Elytra oblong-suboval, 1.57–1.62 times as long as wide, 1.15–1.18 times as wide as the pronotal width, flattened on disc, steeply declivous laterad, with extremely sparse and microscopic punctures; sides gently curved in humeri, almost straight in middle, shallowly sinuate preapically; apices narrowly separated from each other, narrowly rounded at sutural angles; bases each shallowly emarginate, obtusely and angularly countered with lateral margin; striae deep, rather narrow, finely and clearly crenulate, scutellar striole not long; intervals weakly elevated on disc, becoming a little convex apicad and basad, 3rd interval with a series of 6–7 setiferous pores along 2nd stria; marginal series divided into two groups which are widely separated and with one umbilicate pore between the groups, front group consisting of 9–10 and hind one of 11–13 umbilicate pores; microsculpture visible as transverse lines. Hind wings fully developed.

Ventral surface not punctate, with very short pubescence on metasternum and 2nd to 6th abdominal sternites; metepisternum elongate, two-fifths longer than wide; 6 abdominal sternite quadrisetose along apical margin in both sexes, the inner two setae in ♀ a little apart from the margin, widely rounded in ♂ and narrowly so in ♀.

Legs long; fore tibia slender, tri- or quadrispinose along apico-external margin, not sulcate, with pores uniseriately arranged; mid tarsus of ♂ possessing biseriate adhesive hairs on 4th segment from the 2nd, hind tarsus in ♂ as long as and in ♀ one-twelfth shorter than the width of head, 1st segment slightly longer than the 2nd and 3rd taken together (1.08 in ratio) and twice the 2nd, 3rd one-third longer than the 4th, claw segment bisetose along each ventral margin.

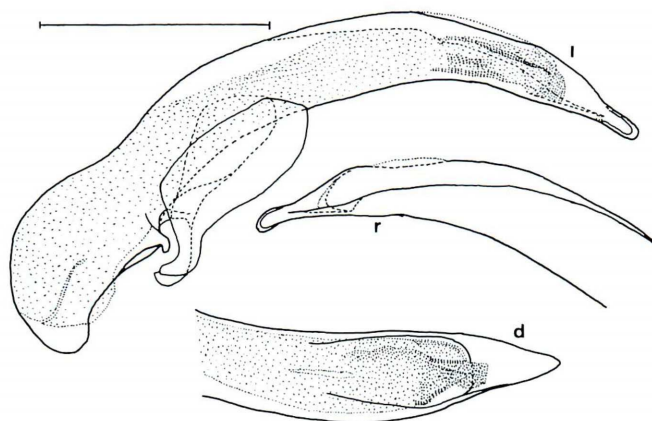


Fig. 6. Male genitalia of *Coleolissus (Tenuistilus) debilopunctatus* sp. nov.; d, dorsal aspect; l, left lateral aspect; r, right lateral aspect. Scale: 1 mm.

Aedeagus (Fig. 6) slender, weakly arcuate, not thickened at apex; apical orifice directed obliquely to the right, inner sac not armed with any sclerites; apical lobes subtriangular, rounded and bordered at distal margin; ventral surface unbordered.

Length: 9.6–10.7 mm. Width: 3.7–4.2 mm.

Holotype: ♂, Lao Pako env., alt. 50 m, 18°10'N, 102°25'E, 35 km NE from Vientiane, Laos, 31-V~4-VI-2004, E. JENDEK & O. ŠAUSĀ leg. (preserved in OMNH). Paratypes: 14♂♂, 10♀♀, same data as the holotype; 1♂, 20 km NW Louang Namtha, 21°09.2'N, 101°18.7'E, alt. 900±100 m, North Laos, 5~11-V-1997, E. JENDEK & O. ŠAUSĀ leg.; 4♂♂, Vientiane env., alt. 150 m, IV-1997 (preserved in cNI).

Remarks. This new species is very similar in shape and coloration to *Coleolissus (Tenuisilus) iridipennis* N. ITO, but is distinguished from the latter by the head a little larger, the pronotum a little narrower and punctate in basal foveae instead of being impunctate, and the aedeagus with apical orifice not directed dorsad but obliquely to the right. Both the species sympatrically dwell at Louang Namtha.

Etymology. The specific name, “*debilopunctatus*” means minute- (=debilo in Latin) and punctate (=punctatus in Latin).

要 約

伊藤 昇. アジアからのゴモクムシ族 Selenophori グループの 3 新種. —— アジア産 Selenophori グループの下記 3 新種を記載した: *Oxycentrus (Oxycentrus) jelineki* from North China, *Oxycentrus (Oxycentropsis) hayakawai* from Borneo, *Coleolissus (Tenuistilus) debilopunctatus* from Laos. *Oxycentrus jelineki* の生息地は, 本属既知種の分布としては, おそらく最北端である. 本種は付節背面に明瞭な軟毛を備える点で特異であるが, これは派生形質とされている. 本属がアジアの南方地域でいちじるしく繁栄していることおよびこの形質をもつことから, 本種の祖先種が最近南方より分布を広げてきたと推定される. *O. hayakawai* は, 筆者の研究のために本種標本を含む多くの材料を提供くださり, また長野県の甲虫愛好家育成と同好会発展に尽力された松本市の故早川広文氏に献名した. 本種を含め, 熱帯アジアには, 本属の微小種が多く分布している.

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